

REMARKS

Claims 1-6 stand rejected under 35 U.S.C. § 102 as being anticipated by Background of Invention (“BOI”) and Adan ‘131 (“Adan”). In order to expedite prosecution, apparatus claims 1-6 have been canceled along with non-elected method claims 7-11, without prejudice/disclaimer to the subject matter embodied thereby, and replaced with new apparatus claims 12-19. Claim 12 is independent. It is respectfully submitted that neither BOI nor Adan, alone or in combination, disclose or suggest each and every feature recited in claim 12.

Claim 12 recites in pertinent part, “an interconnect made of a first conductive film and a second conductive film ... a lower capacitor electrode made of the first conductive film; a dielectric film formed on the lower capacitor electrode; and an upper capacitor electrode made of the second conductive film and formed on the dielectric film, wherein each of the lower capacitor electrode, the dielectric film, and the upper capacitor electrode *has a same pattern*; and lower contacts are formed in the insulating film on the *bottom surface of the lower capacitor electrode ...*” (emphasis added). According to one aspect of the present invention, a capacitor can be formed in which the upper and lower electrodes thereof can be made, if desired, in common with the materials used in the upper and lower portions of a wiring structure, thereby enabling simplification of the fabrication process. Further, lower contacts can be formed in the insulating film on the bottom surface of the lower capacitor electrode, thereby enabling chip area to be minimized; coupled with the respective electrodes of the capacitor being able to have the same pattern so as to enable minimizing the capacitor area, so that a high integration device can be obtained as a result of the claimed *combination* of features recited in claim 12.

On the other hand, neither BOI nor Adan disclose or suggest, *inter alia*, “wherein each of the lower capacitor electrode, the dielectric film, and the upper capacitor electrode has a same

pattern.” In contrast, as shown in Figure 10 of Applicants’ drawings, BOI discloses a lower capacitor electrode 201 having a larger pattern than the upper capacitor electrode 203.

Similarly, as shown in Figure 3 thereof, Adan discloses a lower capacitor electrode 8 having a larger pattern than the upper capacitor electrode 12. Indeed, due to Adan’s structure in which the lower capacitor electrode extends outwardly from the upper electrode for connection to downward contacts, Adan’s structure creates dead space under the capacitor thereby effecting an increase in chip area to make the lower capacitor electrode connections to the downward contacts. Indeed, Adan teaches away from the claimed invention by suggesting that “the top electrode of the capacitor is formed to occupy a smaller width (area) than the bottom electrode, [so that] a short circuit between the top electrode and the bottom electrode of the capacitor can be prevented ...” (*see* col. 8, lines 7-11; *see also* col. 6, lines 7-9). That is, Adan expressly teaches away from “each of the lower capacitor electrode ... and the upper capacitor electrode [having] a same pattern” as recited in claim 12.

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed, either expressly or inherently (noting that “inherency may not be established by probabilities or possibilities”, *Scaltech Inc. v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999)), in a single prior art reference, *Akzo N.V. v. U.S. Int’l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), based on the forgoing, it is submitted that BOI and Adan does not anticipate claim 12, nor any claim dependent thereon.

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claim 12 is patentable for the reasons

set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

Based on the foregoing, it is respectfully submitted that all pending claims are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejections under 35 U.S.C. § 102 be withdrawn.


CONCLUSION

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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